

## Normal values, fluids and equipment sizing in children

### Paediatric normal values

Age ( years )	Resp rate (per min)	Heart rate (per min)	Systolic BP 50 <sup>th</sup> centile (mm Hg)
<1	30-40	110-160	80-90
1-2	25-35	100-150	85-95
2-5	25-30	95-140	85-100
5-12	20-25	80-120	90-110
>12	15-20	60-100	100-120

Tidal volume: 5-7 ml/kg

Quick blood pressure formula for children on 50<sup>th</sup> centile: systolic BP = 85 + (age X 2)

Blood volume: 100 ml/kg in neonates, 70-80 ml/kg by one year of age

Normal urine output >1 ml/kg/hour, except in infants when it is >2 ml/kg/hour

### Blood pressure centiles in children

Age (years)	Significant hypertension (mmHg) 95 <sup>th</sup> centile		Severe Hypertension 99 <sup>th</sup> centile	
	<i>Systolic BP</i>	<i>Diastolic BP</i>	<i>Systolic BP</i>	<i>Diastolic BP</i>
Infant <2 years	112	74	118	82
3-5 years	116	76	118	82
6-9 years	122	78	130	86
10-12 years	126	82	134	90
13-15 years	136	86	144	92
16-18 years	142	92	150	92

When measuring BP the width of the cuff should be more than 80% of the length of the upper arm, and the bladder more than 40% of the arm's circumference.